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ABSTRACT

This 10-day workshop, offered during the 1972 summer session at a state university, was intended to provide practice in teaching and supervisory techniques for persons preparing to be teacher educators in vocational education. Specific educational objectives for workshop participants were to: (1) write student and teacher performance objectives, (2) analyze a teaching skill to define necessary behavioral objectives for the teachers, (3) demonstrate proficiency in teaching skills selected by the student, (4) provide supervision in a face-to-face conference, via remote closed circuit television, and in a group supervisory conference, (5) write a script for a television presentation, and (6) provide a television program illustrating a teaching or supervisory skill. Microteaching, video feedback, instructor feedback, micro-supervision, video recorded teaching, and supervisory models were used as training techniques. Instruments that provided behavioral objectives for teaching and supervisory techniques were given. Participant evaluation of the workshop was positive, although more time is needed to practice these techniques. Also, the participants were too busy to analyze a teaching or supervisory technique in a group session. (AG)

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WORKSHOP REPORT ON THE EDUCATION OF VOCATIONAL-TECHNICAL TEACHER EDUCATORS USING MICROTEACHING, VIDEO FEEDBACK AND MICROSUPERVISION

BY

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Performance Evaluation Project
Rutgers College
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Rutgers University

Mr. Joseph Durand
Department of Instructional Television
Kilmer Campus
Rutgers University

Students who participated were:

Sanford Helman	Middlesex County College, New Jersey
Raymond Hubbard	New York
James O'Brien	EPDA Fellow - New York
Florence Mintz	Doctoral Student Rutgers University
Frank Tomlinson	Humble Oil and Refining Co.
Frank Rozman	EPDA Fellow - Pennsylvania
Joseph Hopkins	Martin Luther King Fellow South Carolina
Ruth Malmstrom	Somerset County College, New Jersey
Roger Gustafson	EPDA Fellow - Michigan
Gay Welborn	EPDA Fellow - Florida

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Charles R. Doty
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SUMMARY

This workshop was offered during the 1972 summer session, July 10-21, under the title "Recent Developments in Technical Education - Priority Teaching Skills." The workshop lasted two weeks (ten days) with sessions from 1:00 until 4:00. Specific educational objectives for student performance were:

1. Write educational objectives for student performance.
2. Write instructional objectives for instructor performance.
3. Demonstrate proficiency in teaching skills selected by the student.
4. Analyze a teaching competency to define the behaviors necessary for the teacher to accomplish the competency.
5. Provide supervision in a face-to-face conference.
6. Provide supervision using remote supervision via closed circuit television.
7. Provide supervision in a group supervisory conference.
8. Write a script for a television presentation.
9. Provide a television program illustrating a teaching skill or supervisory skill.

To provide the students with an opportunity to practice and accomplish these objectives, micro teaching, video feedback, instructor feedback, micro supervision, video recorded teaching and supervisory models were provided and instruments providing exact behaviors for teaching and supervisory techniques were given. The Instructional Television Studio was scheduled for commercial recording for students achieving objective eight and nine. In addition, seventeen and eighteen year old persons were employed to provide real "students" for the teaching sessions.

Student evaluation of the workshop was very positive. Most indicated a desire for more instruction in teaching and supervisory techniques. There was a definite need for more time to practice these techniques. Of the objectives listed above, all were achieved except number four. The students were so involved in planning to teach or supervise that they could not effectively work in a group session to analyze a teaching or supervisory technique.

INTRODUCTION

Despite the tremendous concern to improve instruction, the preparation of teacher educators is sadly lacking. University or college courses on supervision provide little, if any, provision for a potential teacher educator to practice teaching and supervisory techniques. Theory of supervision is lectured on and discussed. But there is no provision for placing theory into practice within the courses.

Shirley Chase reflects the same concern in her report on Micro-Supervision (1971, 3):

> As the need increases for more and better prepared teachers in the field of vocational and technical education, a greater burden is placed on vocational teacher education programs. The crux of the problem of providing effective teacher education programs for preservice and inservice teachers may be the educational preparation and qualifications of the teacher educators. To cope with the increasing pressures for efficiency and effectiveness, vocational teacher education personnel must be adequately prepared to supervise both new and experienced vocational teachers.
>
> Just as teachers practice teaching skills, teacher educators should have opportunities for practicing their supervisory skills. Therefore, the concept of using micro-teaching and video recording at the higher level of preparing teacher educators was conceived. Although teacher educators readily perceive the usefulness of micro-teaching and video recording when working with pre-service and in-service teachers, they do not ordinarily use these techniques as media for improving their own performance and behavior during supervisory conferences with teachers.

PURPOSE OF THE WORKSHOP

The primary purpose of this workshop was to provide, persons preparing to be teacher educators, practice in teaching and supervisory techniques. The educational objectives derived from this purpose were that each student by the end of the workshop be able to:

1. Write educational objectives for student performance.

2. Write educational objectives for instructor performance.
3. Demonstrate proficiency in teaching skills selected by the student.
4. Analyze a teaching competency to define the behaviors necessary for the teacher to accomplish the competency.
5. Provide supervision in a face-to-face conference.
6. Provide supervision using remote supervision via closed circuit television.
7. Provide supervision in a Group Supervisory Conference.
8. Write a script for a television presentation.
9. Produce a television program illustrating a teaching skill or supervisory skill.

PARTICIPANTS

The original intent of the workshop was that there would be an equal number of beginning teachers and persons preparing to be teacher educators. This situation would have allowed the beginning teachers to mainly practice teaching techniques and the potential teacher educators to practice supervisory techniques. However, those enrolled for the workshop were all preparing to be supervisors.

Due to the type of participant enrolled, this workshop was restructured so that each person's role was rotated, i.e., first a teacher then a teacher educator. This rotation of roles, hopefully, would provide the participants with a background of knowledge, practice and feelings of both positions, teacher and teacher educator.

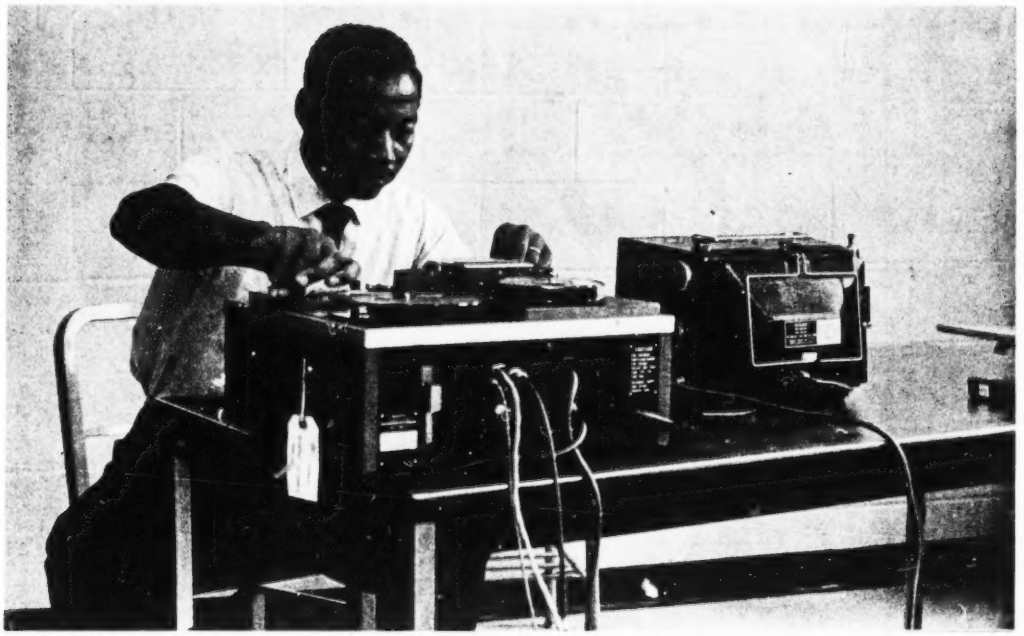
WORKSHOP STRUCTURE

Each participant practiced teaching, face-to-face supervision, remote supervision and group supervision (see definitions following this section). In addition, the participant was involved in group sessions with the other participants when not scheduled for an activity and, also, produced a television script and video recorded model of a teaching or supervisory technique. All participants received information from Dr. Richard Carlson on "Instructional Strategies" and "How to Write a Television Script" by Mr. William Lauzon. Figure 1 illustrates the schedule.

Day	1	2	3	4	5	6	7	8	9	10
Participant 1	O	T RT	T FS	RT FS T	RS	L	RRS	L	GS	M
Participant 2	R	T RT	T FS	RT FS T	RS	E	RRS	E	GS	M
Participant 3	I	T RT	T FS	RT FS T	RS	C	RRS	C	GS	M
Participant 4	E	T RT	T FS	RT FS T	RS	T	RRS	T	GS	M
Participant 5	N	T RT	T FS	RT FS T	RS	U	RRS	U	GS	M
Participant 6	T	T RT	T FS	RT FS T	RS	R	RRS	R	GS	M
Participant 7	A	T RT	T FS	RT FS T	RS	E	RRS	E	GS	M
Participant 8	T	T RT	T FS	RT FS T	RS	#	RRS	#	GS	M
Participant 9	I	T RT	T FS	RT FS T	RS	1	RRS	2	GS	M
Participant 10	O	T RT	T FS	RT FS T	RS		RRS		GS	M
	N									

T= Teaching session
RT= Reteaching session
FS= Face-to-Face Supervision
RS= Remote supervision
RRS= Review Remote Supervision Feedback
LECTURE #1= Dr. Carlson
LECTURE #2= Mr. Lauzon
GS= Group Supervision
M= Model Development

Figure 1 Schedule



SELF CRITIQUING VIA VIDEO FEEDBACK (JOSEPH HOPKINS)

MICRO-TEACHING LAB (JAMES O'BRIEN)

Orientation. The orientation began with an explanation of the purposes of the workshop, a filmed model of microteaching and a video recorded model of a micro supervision session. Participants then received an audio recorded lecture with overhead projected illustrations. The lecture was concerned with educational objectives which the participants were to use in their instruction and supervision. Appendix C contains the script for the lecture. Participants were requested to practice writing educational objectives (see Appendix D). A format for lesson plans was given to the participants for their use (Appendix E). A brief discussion of the techniques of video recording followed (Appendix F). Participants were assigned the task of preparing a micro lesson, theory or manipulative, to be taught the next day.

Work. The participants were only required to prepare three different lessons because of the teach, replan, reteach microteaching format. They also practiced face-to-face twice. They prepared one remote supervisory session on television and, also, received feedback on one teaching session via remote supervision. They received information (lecture #2) on television script writing, prepared a script and produced a model teaching or supervisory technique. One group supervision session was also a part of their experience.

In addition to this practice the participants were asked to keep a diary of their feelings as they went through these experiences.

Strategy. The strategy of instruction by the workshop director was to allow the participants to first teach and supervise and then supply the instruments (see Appendix G and M) containing behaviors necessary to achieve certain techniques to the participants. This method allowed the participants the opportunity to measure their capabilities brought to the workshop against the behaviors given in the instruments. All first sessions, teaching or supervision, were saved so the participants could view their performance at a later date, e.g., six months later to determine behavior change.

The participants were allowed to self critique their own performance on the first teach, reteach sessions. Self critiquing was done to reduce tension and allow the participants to practice observing specific behaviors.

Scheduling. A person preparing a master schedule should allow twelve minutes for a teaching session, twenty minutes for a face-to-face supervisory session and thirty minutes for a remote supervisory session, i.e. in which a person is reviewing a teaching session and placing a critique on tape. Twenty minutes should be allowed for a person to review remote supervision feedback.

DEFINITIONS

Face-to-Face Supervision with Video Feedback. The teacher had a conference with the teacher educator, with video feedback. The teacher educator personally observed the teaching session which was video recorded. Immediately following the teaching session, the teacher and teacher educator, used a critique form on a selected teaching skill to evaluate the teacher's performance. The teacher educator reviewed the teacher's self critique. The students left the classroom, and the teacher and teacher educator viewed the replay of the teaching session. No comments were made by either person during the first viewing; subsequently, the session was analyzed and discussed. The video feedback was used to solve any disagreements between the teacher and teacher educator on what had actually occurred.

Group Supervision. After the participants have had the experience of teaching, supervising and having their performance critiqued, group supervision is appropriate. This assumes that the participants have learned to accept criticism. Group supervision involves three or more persons who show a video recording of one or more of their performances for analysis by the group. The workshop director strives for participant interaction in this setting and must play a low profile chairmanship position, i.e., not dominate the performance analyses.

Microteaching. Cooper and Allen gave the following definition of microteaching (1971, 1-2):

> Defined most succinctly, microteaching is a teaching situation which is scaled down in terms of time and numbers of students. Usually, this has meant a 4-20 minute lesson involving from three to ten students. The lesson is scaled down to reduce some of the complexities of the teaching act, thus allowing the teacher to focus on selected aspects of teaching. Frequently, one microteaching episode includes teaching a lesson and immediate feedback on the

teacher's effectiveness. This feedback may come from videotape or audiotape recordings, supervisors, pupils, colleagues, or from the teacher's self-perceptions. Some of the variable aspects of micro-teaching include lesson length, number of reteaches, the amount and kind of supervision, the use of videotape or audiotape recordings, and number and types of pupils.

Microteaching is not synonymous with simulated teaching. Rather, the teacher is a real teacher, the students are real students, and learning does occur in the short lessons. Many reports of micro-teaching programs describe the students as peers, that is, fellow student teachers. The authors of this paper do not consider this to be microteaching. In many cases, the peers are usually role playing: they are acting as they think secondary or elementary school students would behave. Even if they are not role playing, but behaving naturally, they are still not part of the population the student teachers are preparing to teach. While peer teaching can be a very valuable experience, the authors believe it should not be equated with microteaching, where the students are "real."

In this workshop the teaching sessions were limited to seven minutes. Students, aged 17 and 18, were employed for the workshop.

Micro-supervision. A scaled down experience (15 minutes maximum) in supervision which employs the principles of microteaching in the preparation of teacher educators. In this workshop, micro-supervision involved the practice of the skills of conducting supervisory conferences.

Model. A video recording of a complete or partial teaching or supervisory session which illustrates a selected skill, e.g. oral questioning or introduction of a conference.

Remote supervision. A technique whereby a teacher received supervision via a teacher educator's comments recorded on the video tape. These comments were recorded immediately following the recording of the teacher's teaching session. This allowed the teacher to view his teaching session and then the critique. There was no personal contact between the teacher and teacher educator.

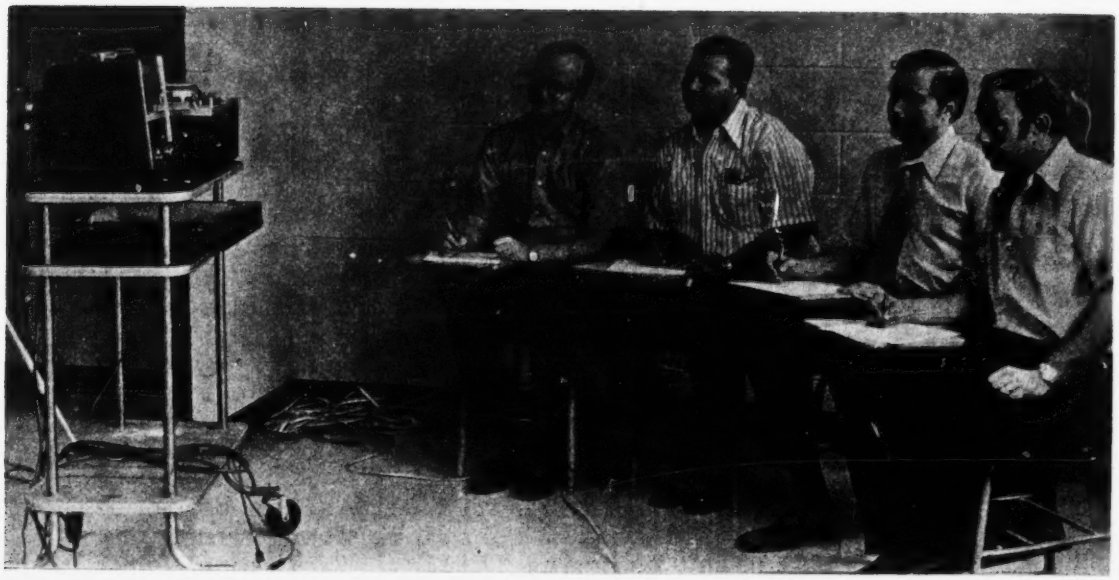
Video feedback. The procedure involved preparing video recordings of all micro teaching and micro-supervision sessions to provide opportunities for participants to view replays of the sessions during the critique and analysis portion of the micro-teaching cycle and to evaluate change in teaching and supervisory performance.

FACILITIES AND MEDIA

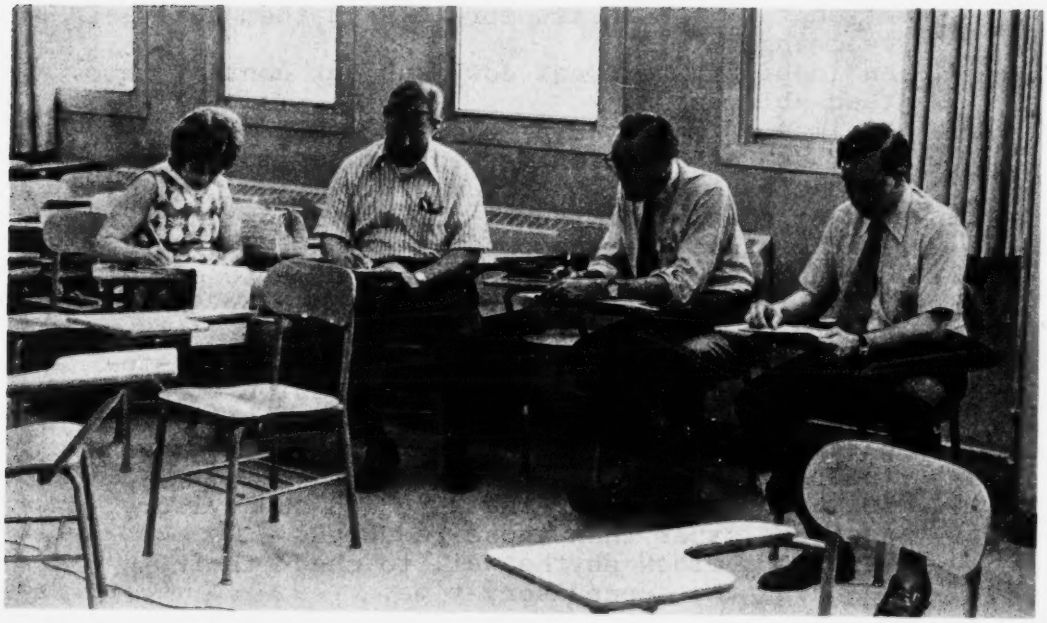
Three rooms are needed for this type of workshop. One room is needed for planning and group work. The other two rooms should each have two complete closed circuit television systems. This arrangement allows teaching, supervision or video feedback to be held simultaneously in two rooms. Also, if a set breaks down all one needs to do is place tape on the operating machine and continue with a minimum amount of lost time. Time limitations must be rigorously enforced by a workshop director.

Each room where recording is to occur should contain a chalk board, flip chart, overhead projector and screen. A rug is also desirable to reduce noise.

Video tape should be calculated for use at the rate of ten minutes for each teaching session and fifteen minutes for each supervisory session planned for the participants. It is especially desirable to retain the participant's first performance/s so they can determine at a later time their behavior change. An extra tape should be provided for this.



GROUP SUPERVISION (HELMAN, GUSTAFSON, ROZMAN AND HUBBARD)



PLANNING (MINTZ, GUSTAFSON, TOMLINSON AND ROZMAN)

PARTICIPANT BEHAVIOR

The workshop director recorded critical incidents and the participants' reactions and behavior during the workshop. Also noted were improvements that should be made in future workshops.

Critical Incidents. The following were the director's notes:

1. Tendency to throw as much information at the students as can be done in 5-7 minutes.
2. Realization that none of the participants had received any supervision after receiving their formal education or student teaching.
3. Realization that they never had the opportunity to really "practice teach." In student teaching or supervised teaching there was no opportunity to experiment.
4. Engineering students and faculty began coming into the rooms to ask questions about video recorders and teaching skills. (Workshop was conducted in the Rutgers Engineering Building).
5. Resistance to change. One student said, "You can't change me after all these years of teaching."
6. Increased conversation among the participants concerning basic human drives and learning theory.
7. An anxiety to perform which blocked out any attempt by the instructor to have them analyze teaching skills.
8. An inability to break down subject content into teachable units.
9. Minimum of involvement of students.
10. Poor use of questioning techniques among some participants.
11. The expression of thanks for the opportunity to learn to use the equipment.
12. Comments on voice, appearance, cosmetic effects.
13. Possible over complimenting the teacher in supervisory sessions.
14. After three teaching sessions and one face-to-face supervisory session an expression of more need for feedback. In other words, the participants were beginning to want to change their behavior.
15. Voluntary viewing of teaching and supervisory sessions other than those required.
16. Wanting a clock on the wall to check their teaching and supervisory time.

Microteaching. Participant behaviors when they initially used microteaching were:

1. High concern with subject content
2. Repeated references to "we" rather than what the student was to do
3. Little involvement of students
4. Usual 80% teacher talking
5. Rambling in teaching - no structure of lesson plan
6. Introduction of lesson virtually non-existent
7. Some nervousness
8. Inability to break subject content into consumable parts for student learning
9. If the time ran out the person teaching "threw" what subject content was left at the students.
10. Intent observation of performance on television

Needed to:

1. Give the instrument "Teaching a Complete Lesson" to the participants on the first day
2. Spend more time in demonstrating the use of the video equipment

Analysis of Teaching/Supervision Techniques. Because of the fact that the participants would be teaching or supervising every day, they could not concentrate to analyze techniques. They were concerned with preparation. Group discussion always turned to present problems of graduate study. One person expressed this thought, "Practicing these techniques in this workshop has made me realize that all I have been getting is theory. I don't know how to perform. This scares me!"

Face-to-Face Supervision. Probably the greatest expressed need was more instruction concerning supervision. Participants expressed anxiety when supervising but anticipated feedback on their teaching sessions. Some resistance to being critiqued was shown.

REMOTE SUPERVISION

by

James C. O'Brien, Workshop Participant

Supervision, according to Kyte (1930), is the "maximum development of the teacher into the most professionally

efficient person she is capable of becoming." Professional efficiency was presumed when the teacher was competent in self-analysis, self-criticism and self-improvement. Kyte's type of supervision was accomplished in a face-to-face situation usually involving a classroom observation.

Remote supervision is a technique adapted from studies done by Chase, Doty and Cotrell (1971) at The Center for Vocational and Technical Education, The Ohio State University in Columbus, Ohio. This technique accomplished professional efficiency through the use of micro-teaching and video taping, the latter extending to the supervisory conference as well.

The purpose of this paper is to relate remote supervision as it was experienced by the participants in this workshop.

The preparation of the participants for remote supervision began on the initial day of the conference. The technique of micro-teaching was introduced by a filmed model. The participants then planned, taught and video taped a short lesson, five to seven minutes in length, demonstrating a manipulative skill or explaining a theory. The student body consisted of four to five students at the eleventh and twelfth grade level.

On the fourth day of the workshop this lesson, or a similar one, was taught for remote supervision. The taped lesson was given to a participant assuming the role of supervisor. The supervisor was alloted thirty minutes in which to view the tape, complete evaluation forms, formulate a criticism and tape the critique of the lesson on videotape. The tape was then returned to the teacher on the following day. The teacher was required to view the lesson and the critique of the supervisor, and to respond in writing to the supervisor's comments. In addition, the teacher had the opportunity to comment on the supervisor's role performance, in other words, to critique the supervisor.

The total activity provided feedback in both teacher and supervisor roles, thereby enabling the participant to receive instruction and practice in whatever role he was playing. The schedule was so constructed that each participant had an opportunity to act in both teacher and supervisor positions. Each participant was asked to record his feelings at the conclusion of each daily session and to submit them at the conclusion of the workshop.

Reactions and Feelings

The experience of the participants in the roles of both teacher and supervisor were quite candidly expressed in their commentary. A summarization of the feedback follows.

Participants in the teacher role generally commented that micro-teaching placed time restrictions upon them which caused them to render subpar performances. Most teachers felt that the supervisor gave a fair and adequate critique of their lesson. Most teachers felt that the supervisor delivered the critique well. One person commented negatively indicating that the supervisor seemed reluctant to criticize. This approach made the teacher uncomfortable. Only one teacher became argumentative about the supervisor's critique and offered several rationalizations for his teaching behavior. Several participants expressed feelings of uneasiness before the camera.

Participants in the supervisor role expressed concern about how they would handle the supervisory task. They had apprehensions about: 1) what to say, 2) how much to say, and 3) how to organize it. Many of the supervisors again were uneasy before the camera. They expressed negative feelings about: 1) tension, 2) nervousness, 3) inability to establish eye contact, and 4) difficulty in formulating and delivering commentary. However, despite these negative feelings, the teacher's responses to their critiques were quite favorable.

Summary

The concluding remarks are drawn from the comments made both formally and informally throughout the remote supervision activity. Most participants felt that the micro-teaching experience was very worthwhile and for most of them it was an entirely new experience. They envisioned the video-tape equipment as a very useful tool in supervision, self-evaluation and teacher training. However, they expressed concern that too many teachers and supervisors were unfamiliar with its operation and potential use. Many participants perceived that video-taping enabled the teacher to maintain a record of progress and successful performance, thereby providing necessary feedback and appropriate motivation. While participants acknowledged the value of video-tape and remote supervision in time utilization for both teacher and supervisor, they did not perceive it as total replacement for face-to-face contact with the supervisor.

Conclusion

The general consensus of the group was that the experience was significantly rewarding in terms of exposure to new equipment and new techniques. Many of them expressed intentions of utilizing video-taping equipment in their instructional activities for the coming year, and as a tool for self-improvement. Several participants expressed need for the workshop to be offered again in the near future. Most participants exited the conference with greater appreciation for value of detailed planning and adequate supervision in the improvement of instruction. This awareness may well be the key to their success in becoming "professionally efficient" individuals.

Group Supervision. This was evaluated by the participants as being extremely useful, especially the interaction among all members. The main problem occurring in this session was the habit of participants to rationalize their not achieving some technique by saying, "If I had not been pressed for time by the micro (format) I would have succeeded." One member finally told the group they were rationalizing - but no one seemed to listen to him.

TELEVISION SCRIPT

Mr. William Lauzon stated that pre production requires the planning of prop requirements, e.g., chairs, background or power. The approximate time of the program must be known. Art work must be completed, e.g. titles, charts, pictures or working models.

There are three types of scripts; 1) the fully scripted show in which every word on the script is said and audio and video cues plainly marked; 2) an outline script that shows the order of subjects to be covered with a general list of subjects where cues would be required and 3) the semi scripted show that has open and close fully scripted material. The semi scripted is used for educational and variety shows which include ad-lib commentary and discussion. Semi scripts have definite cues, sentences or words, that allow the T.V. director to control audio and video recording.

MODEL DEVELOPMENT

Video recorded models developed in the television studio were: 1) complete lesson 2) recognizing verbal and non verbal cues with supervisory feedback, 3) oral questioning, 4) common mistakes in teaching, 5) introducing a lesson and 6) giving an assignment.

One of the problems in producing a model in a television studio is the fact that if a teacher points to a visual aid, the studio director will focus the camera on the visual aid. The workshop director should stay in the control room to direct which scenes are to be recorded.

DIARY OF FEELINGS

by

Sanford Helman
County College Instructor

I was overwhelmed the first day, since this was the first course in Education. After the first week, I started to understand what was going on.

When Frank did my remote supervision I initially felt hostile to him. I then replayed my tape and I saw a few minor mistakes that he saw. This calmed me down. Another thing that helped was no grade pressure. However, there was peer pressure. This was present and it aided in keeping you alert.

Face-to-face supervision of Frank helped sharpen some other weak spots in presentations. Again I felt some hostility but it wasn't very much.

I felt the group remote session on supervision to be most helpful.

One additional diary is in Appendix P for the reader who may be interested in participant comments.

INSTRUCTIONAL STRATEGIES SESSION

by

Raymond Hubbard, Workshop Participant

Dr. Richard Carlson met with the participants of the Recent Developments in Technical Education Workshop on July 17, 1972. He introduced the participants to some new instructional and achievement motivation strategies. These strategies can be used to help students assess their career goals by better understanding their own behavior in terms of their willingness to assume responsibility and/or take chances. Three of these strategies introduced were: 1) the forced learning exercise, 2) memoriam, and 3) the darts-dice achievement game.

Briefly, the forced learning exercise was the interative process of introducing each of the participants.

This accomplished the goal of not only getting the participants to better know each other, but tended to develop a relaxed atmosphere for the remainder of the session.

The memoriam exercise allowed participants to project long-term goals. Through a series of questions, the members had an opportunity to get personal insight into their stated aspirations.

The darts-dice game is an achievement motivation strategy that employs decision-making skills. The game is a means of getting participants to discover and discuss the difference between taking personal responsibility for their decisions (actions) and leaving things to chance.* It is a simulation that allows the participant to experience goal setting and its results.

Each participant in the game acts within three different environments. The student first plays the game isolated from other members of the group, except the instructor. Second he plays the game while his group observes. He then participates as a member of a team. During these exercises participants exhibited high involvement.

After the exercises the participants had an opportunity to discuss their experiences, and analyze their behavior. Through this discussion some specific concepts were introduced. The main concepts covered were risk taking, feedback, and personal responsibility. Other concepts such as team affiliation, planning strategy, and learning through the group process were also discussed.

Through this feedback critique the participants discovered transferable applications for their own particular teaching and/or counseling situations. Many of the workshop participants expressed interest in learning more about achievement motivation strategies. It was the opinion of the participants that the presentation was a worthwhile addition to the workshop.

* A detailed description of the darts-dice game is in Appendix R.

EVALUATION

The participants evaluated the workshop on the final day (see Appendix Q for evaluation instrument). The participant questionnaire is based directly on the workshop objectives. All answers to all questions were positive. "Overall, this workshop gave me a greater appreciation for precision and conciseness as a necessary part of teaching. It made me aware of the importance of evaluation - both by myself and by others - in the teaching process" seems to sum up the evaluative comments by the participants.

Future Workshops

This type of workshop will be offered in the future because the participants recommended that it be offered again. Ruth Malmstrom wrote, "(I) Feel that it should be required for everyone in the program." For others who may want to conduct such a program heed the comments of one participant who labeled one section of the diary of feelings - "Empathy for our Leader."

Coordination
Scheduling class
Employing students
Scheduling students
Busing students
Supervising
Technician
Technical advising

Too Much!

Planning
Contacting resource persons
Security for equipment
Cleaning equipment
Conducting sessions on vocational competencies
Father confessor

References

Chase, S. A., Doty, C. R. and Cotrell, C. J. Micro-Supervision. Columbus, Ohio: Center for Vocational and Technical Education, October, 1971.

Kyte, G. C. How to Supervise. Boston: Houghton - Mifflin Company, 1930.

Cooper, J. M. and Allen, D. W. "Microteaching: History and Present Status." In Cooper, J. M. et al. Microteaching: Selected Papers. Washington, D.C.: Association of Teacher Educators, September 1971, 1-32. ED 055 960.

APPENDIX

APPENDIX A

PROSPECTUS

To: State of New Jersey
Department of Education
Division of Vocational Education
Trenton, New Jersey 08625

From: Rutgers University
The State University of New Jersey
New Brunswick, New Jersey 08903

Workshop Director: Charles R. Doty
Department of Vocational-Technical Education
The Graduate School of Education
Rutgers University
10 Seminary Place
New Brunswick, New Jersey 08903
Telephone (201) 247-1766 ext. 6937 or
(201) 247-7636

Title: Workshop for Vocational and Technical Instructors

Funding Source:

Duration: Two Weeks

Purpose: In-service and pre-service instructors are to be provided instruction on teaching skills, behavioral objectives for course construction and practical learning problems of adolescent and adult students. Potential teacher educators, if enrolled, would be given instruction on supervisory skills.

Workshop Director: Charles R. Doty
Charles R. Doty

Department Chairman: Carl J. Schaefer (for C. C. Drawbaugh)
Charles C. Drawbaugh

University Contract Officer: Albert Hanna
A. Hanna ALBERT HANNA
RESEARCH CONTRACT OFFICER

Consulting Agency Representative: James A. Haworth
JAMES A. HAWORTH
Assistant Treasurer

ABSTRACT

Title: Workshop for Technical and Vocational Instructors

Workshop Director: Charles R. Doty, Ph.D.
Adviser in Technical Education
Department of Vocational-Technical Education
Graduate School of Education
Rutgers University
New Brunswick, New Jersey 08903

Duration: Two Weeks

Problem: Vocational instructors at the secondary level and technical instructors at the post-secondary level have expressed the need for the opportunity to upgrade their skills in teaching. Principals and community college presidents in the State of New Jersey have also emphasized this need due to, evidently, their observation of inadequate teaching competence of some instructors.

Purpose: The purpose of this workshop will be 1) to give the participants the opportunity to practice specific teaching skills and to receive feedback via closed circuit television and 2) to obtain video recorded teaching and supervisory sessions that may be used by teacher education institutions in the State of New Jersey and, possibly, the Performance Evaluation Project.

Contributions to Education: Participants in this workshop will be able to explore new teaching strategies without having to worry about making mistakes. And, even more important, not have to live with mistakes made as if they experiment in their regular teaching assignments. The video recorded sessions may be used to develop models of teaching and supervision for further use by teacher educators in the State of New Jersey.

Procedures: Principals and community college presidents and department chairmen will be notified of the workshop. Existing instruments giving specific behaviors for selected teaching skills and new instruments to be provided by the Performance Evaluation Project will be examined for possible use. Equipment will be rented and video tapes purchased. Teaching and supervisory sessions will be scheduled. Supervisory strategies will be developed. The workshop will be conducted. Evaluation will be conducted immediately after the workshop and three months into the following school year. Report of the workshop and evaluations, immediate and delayed, will be submitted.

Budget

Twenty-two 1/2" - 1/2 hour video tapes @ $21.50 each	$473.00
Students, 8 x 3 hours per day x 8 days x $3.00 an hour (eleven actually employed at lower rate)	576.00
Supplies Stencils, paper, pens, envelopes	35.00
Communication Postage	10.00
Typing Costs	150.00
Publishing of Report	150.00
Total	$1,394.00

APPENDIX B

Rutgers University
Division of Instructional Television

Date: _____

I authorize you to record on film, tape, or otherwise, my name, likeness, and performance; and I further authorize you, your successors or assigns to use such recordings or films for educational television broadcasting and/or closed-circuit telecasting by Rutgers - The State University or any other educational broadcasting station or educational institution and/or for non-profit audio-visual purposes without limitation.

Date of Performance: _____

Name of Program: _____

Signed: _____

Name Printed: _____

Address: _____

_____

To be signed only if person signing the above is a minor:

I, the undersigned being the parent or guardian of the above named infant, do hereby consent to the above authorization and consent.

Parent or Guardian: _____

APPENDIX C

DEVELOPING PERFORMANCE OBJECTIVES FOR VOCATIONAL EDUCATION

by
Charles R. Doty

The objective of this report is for you, at the end of the presentation, after listening carefully, asking questions and discussing the subject, to be able to describe the context in which developing performance objectives for vocational education exists and list the three components of an educational objective.

Management by objectives in education, business and industry is in full motion. Educational accountability is being demanded. Performance contracting is in the headlines. Over population of most types of teachers places the teachers in the position of producing or leaving. Turn-keying, education vouchers, incentive pay are all attempts to increase educational efficiency.

Besides educational or behavioral objectives there are PPBS (Planning, Programming, Budgeting System), needs assessments, systems analysis and PERT (Program Evaluation and Review Technique) which are being introduced and used to increase educational efficiency. State plans are demanding that the school districts describe all programs in proper educational (behavioral) terms.

These facts make it essential that each educator, whether administrator or teacher, learn to properly write and use educational objectives in his work. It should be pointed out that most research proposals and program proposals are being turned down because no or improperly stated objectives are included.

The recent initiator of educational objectives being properly used was Ralph W. Tyler. Later Robert F. Mager produced his helpful text Preparing Instructional Objective, 1962. He followed this one with the text, Developing Vocational Instruction, 1967. The market is now being flooded with self-instructional text and accompanying slides and audio tapes. W. James Popham and Eva L. Baker have two texts on the market, Establishing Instructional Goals and Systematic Instruction. These four texts should

give a good picture of educational objective construction and instruction.

Educators have really been discovering America again. What we are doing had been initiated by military education years ago. Educators have resisted their system because they viewed teaching as an art - and, therefore, almost ruined it: this is partially the reason for the poor reputation of education methods courses.

The context, in which developing performance objectives for vocational education exists, begins with the five basic institutions of man's society; economic, educational, family, political and religious. These institutions express needs and wants. Their expressions run from talk to violence. Each including the educational institution itself, makes demands upon the educational institution. The educational institution, if it is receptive, begins the process of developing potential solutions to satisfy these wants and needs. (If it is not receptive, the institutions, as history shows set up their own educational systems.)

Assuming for purposes of this report that the educational institution does pursue potential solutions, two basic questions must be answered. These are, of course, "What to teach?" and "How to teach?" both of these questions are of equal importance.

The answer or answers to the question, "How to teach?" are derived from philosophies of education and knowledge from psychology of learning. These sources should provide the criteria or guidelines for instruction.

The question "What to teach?" will receive the major explanation in this half of this report. For those in education to determine what to teach, if persons representing the other institutions have not been specific in their demands, they, the educators, must establish criteria for structuring man's knowledge and realize that within each institution there are four domains of knowledge. These domains are formal, descriptive, prescriptive and technological.

Formal knowledge provides the tools to order all knowledge. It can best be described as logic. Descriptive knowledge is as its term implies, descriptive. This domain provides knowledge through the results of observation of natural or man made phenomena.

Prescriptive knowledge is that which provides man with values. Decisions concerning what is good for man are formulated in this domain.

Technological knowledge is the knowledge of practice or application. Journalism, Law, Education and Electrical Technology are examples of this knowledge. Each of these domains can be viewed separately yet cannot survive, for long, without the support of the others.

Examples of criteria to structure man's knowledge in the five institutions of man's society are:

It includes all practices which effect humans and Things (natural or man made)
It has mutually exclusive categories
It is adequate for structuring instructional curricula

Once the criteria have been established each institution should be examined to determine its basic components. Consider the economic institution. The purpose of the economic institution is to provide economic goods and services to the consumer. It accomplishes this by producing these goods through extractive, genetic, manufacturing or construction. Goods may be delivered directly to the consumer from the extractive or genetic industries (goods such as coal or wood) or they can be processed by manufacturing or construction before consumer use.

With this structure or/and an expanded one, the educators can begin to develop a taxonomy. A taxonomy is a logical classification of functions and/or things, natural or man made. It is not, for purposes of curriculum development, an occupational analysis.

Consider the question, "What happens to a worker during his working career within the economic institution?" or "What practices are involved to provide a business or industry with personnel?"

Following is a taxonomy of personnel practices. Major functions are hiring, training, working, advancing and retiring. Logical expansion of these major functions results, for example, in hiring having three sub-categories; recruiting, selecting and inducting. These sub-categories can then be further analyzed. In the development of the taxonomy at this level no particular occupation is considered, i.e., personnel manager or education director. These practices or functions probably apply to any of the institutions of man's society.

A taxonomy in this form has many uses. A few of these are:

To structure instructional content
To evaluate curricula
To determine clusters of occupations

Also the taxonomy, if developed fully, gives a complete picture of a field of knowledge within an institution. This picture can be effectively used to view the entire spectrum of education. Unfortunately, such complete taxonomies are incomplete or non-existent.

Career analysis may be aided with the use of complete taxonomies. A person wanting to pursue a career in personnel management would be greatly aided just by seeing the taxonomy on personnel practices. This taxonomy coordinated with occupational titles with the functions listed would show the number of career positions within the area.

Occupational analyses involve the thorough observation and recording of all knowledge, attitudes and tasks needed for an occupation. Techniques in analysis range from the use of film, slide sequences, video recording, personal interviews, armchairing to personal observation of the worker on the job.

Occupations must be analyzed due to the fact that titles of occupations are most inaccurate for classifying functions. Titles range from custodians to systems engineers, yet with the same functions.

Occupational analysis must move from identification of major functions to specific tasks within those functions. For example, waiting on tables could be a major function but to wait on the table a task would be to set up the place setting. In addition, the analysis must produce information on knowledge needed and attitudes needed.

The conversion of information from the taxonomy or the analysis involves stating educational objectives, upon which all other educational endeavor rests. The information on knowledge, functions and tasks and attitudes must be converted to educational objectives in the cognitive, psychomotor and affective domains. Cognitive is knowledge. Psychomotor means manipulative skills and affective represents attitudes.

Before one begins to immediately write these educational objectives more information or theory behind educational objectives should be examined. If one were to look at the first order matrix of objectives, not just educational objectives, a person would realize that there are various levels of influence on objectives, different types of objectives and societal applications of objectives. Going to the second order matrix of objectives one sees that objectives for any societal institution are affected by international, national, state, county, municipal, school, department, teacher or individual. Four types of educational objectives exist, cognitive, affective, psychomotor and action pattern - which is a combination of the first three. Of course, objectives are used by all five institutions of man's society.

If one were to examine the cell of the matrix for the teacher influencing the objective, the cognitive objective and the educational application of the objective a third matrix can be shown.

This third order matrix reveals that there are ultimate and immediate cognitive objectives. Ultimate objectives might be those that could be measured or would occur in the student in the future, one week, one month, one year or decade from the time of the lesson or course of study. Immediate objectives would be those performed by the student during the lesson or course of study. Educational application of objectives would be for program planning, curriculum development of lessons and courses, instruction and evaluation.

Educational objectives must, therefore, be stated as ultimate or immediate, for program planning and curriculum development. Objectives are also stated for instruction and evaluation. Probably the objectives for the prior elements would be used as guides for selecting instructional strategies and evaluation procedures. These objectives discussed apply only to the cognitive developed. When guidelines for the action pattern become available these should also be developed. For a complete roster of educational objectives for each function or task at the teacher level, thirty-two sets of mutually exclusive, yet dependent, educational objectives would be needed. A monumental job, but one that must be done in the future.

The development and or procurement of materials including texts, laboratory manuals, equipment, supplies, selection or development of instructional strategies and evaluation is then completed. These are piloted, revised and implemented. Evaluation occurs in the immediate and ultimate levels. Revision or elimination then occurs.

Before moving into the next phase of this report on the three components of an educational objective, it should be pointed out that the examples to be shown are in the immediate evaluation and psychomotor levels.

Slide - Focus

Slide - Blank

Slide - Title, developing learning objectives

Slide - Objectives are developed from the knowledge, values and skills needed or wanted by man's society

Slide - Teachers either develop or receive these educational objectives

Slide - The goals the teacher achieves depends upon his teaching objectives. Almost every beginning teacher is more concerned about what he is going to do rather than the student. For example, you may soon find yourself saying "today I am going to give a lecture."

Slide - The goals the learner achieve depend upon the learning or educational objectives.

Slide - In other words the curriculum goals equal the learner achievement.

Slide - Learning or educational objectives contain three components: 1) behavior, 2) conditions, and 3) standards

Slide - Behavior must be stated in specific action verb or verbs that are observable or measureable, both preferably. Immediate objectives may be observed or measured during the course of study or while the student is in school. Ultimate objectives may or may not be observed or measured by the school - but certainly will be by society.

Slide - Good examples of specific action verbs are:
Draw a diagram for _____.
Distinguish between _____ and _____.
Write the definition for _____.
Point to the _____.

Slide - Poor examples of action verbs are:
Understands the constitution
Is aware of the theory of flight
Is familiar with decimals
Really understands the constitution

Slide - Remember - the behavior must be an action verb that is observable and, hopefull, measureable. How else can you give the student and parents a proper evaluation of student progress?

Slide - Consider the following behaviors:
1) order objects by length from the shortest to the longest.
2) type a business letter.

Slide - Conditions the second component of an objective, define the aiding or limiting factors which influence the students performance or behavior.

Slide - Consider the following conditions for the two behaviors stated previously:
1) given 10 sticks varying in length from 2 to 12 inches, at least 1/2 inch between any two
and .

Slide - Again, remember that conditions define aiding or limiting factors which influence the students performance or behavior.

Slide - Standards, the third component of an objective, define the accuracy or proficiency of the students performances or behavior.

Slide - Standards are stated in specific terms of accuracy and time. Of the three components, this one will be the most difficult to specify.

Slide - The two objectives, ordering objects and typing a letter, are completed with the addition of the standards. For objective one, the student must order all objects in sequence in a time limit of five minutes.

For objective two, the format must be correct; one typographical error allowed; with a time of ten minutes.

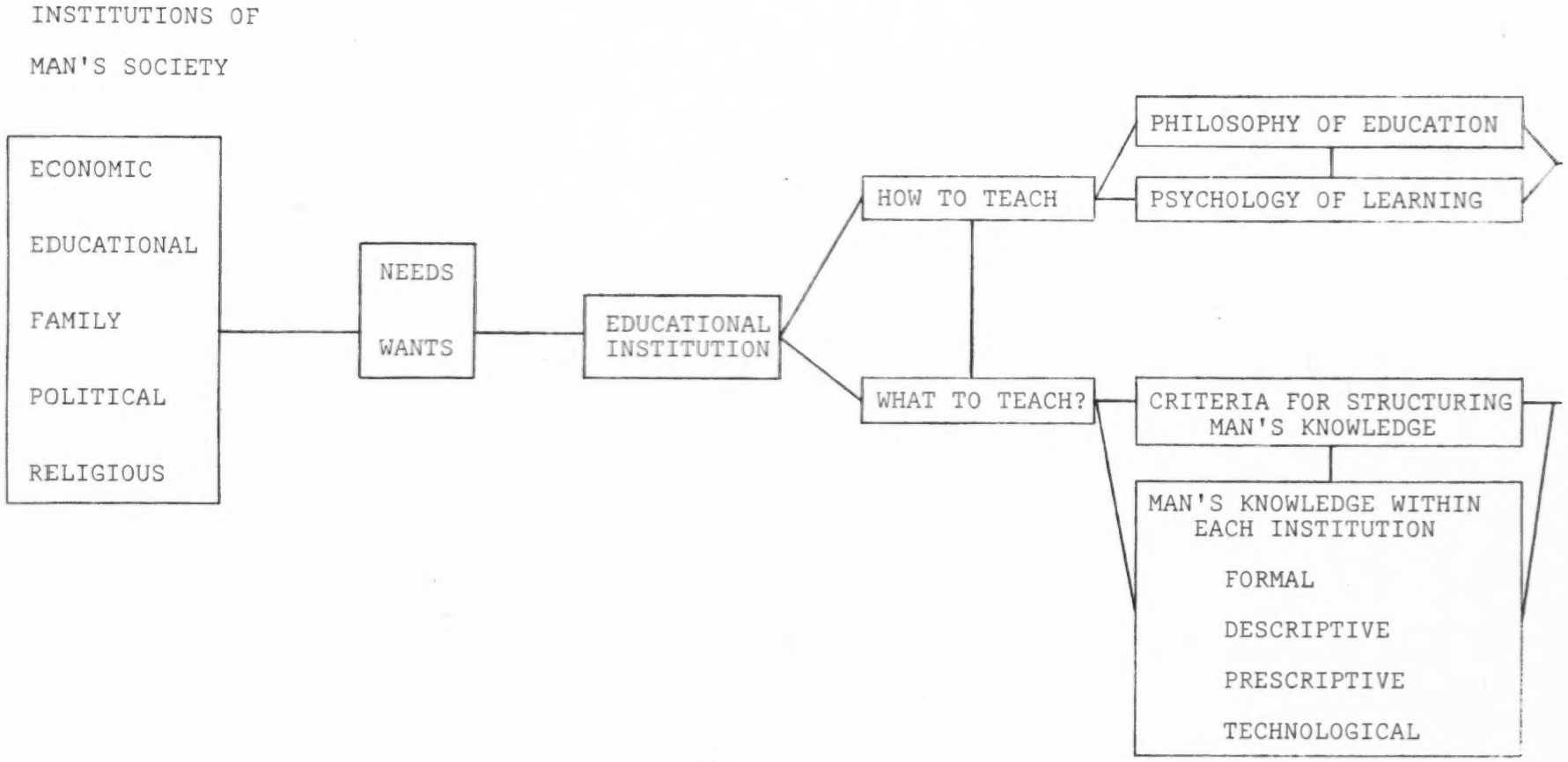
Slide - The learning objectives developed will be used by the teacher to plan his lesson plans, instructional strategies and evaluation procedures as well as inform the learner what is expected of him.

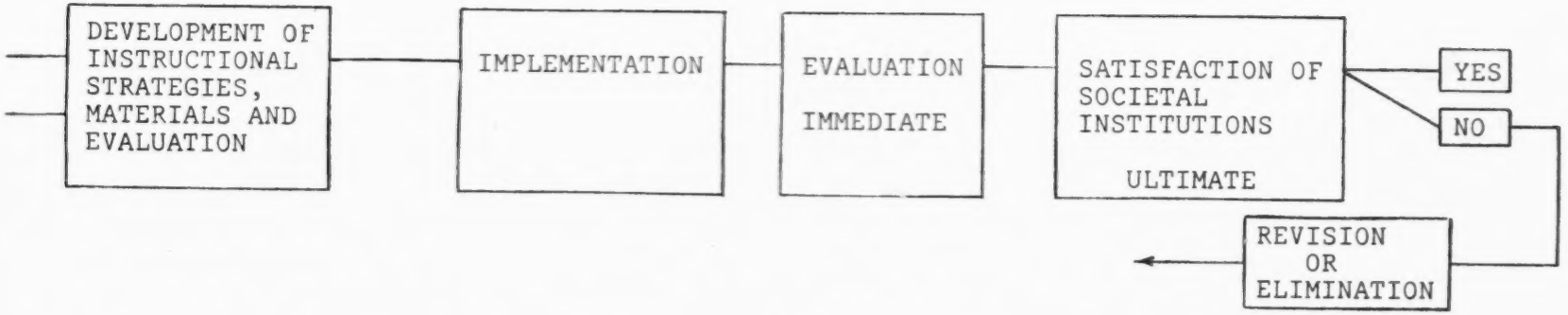
Slide - In summary, each learning or educational objective has three components: 1) behavior; 2) conditions; and 3) standards.

Slide - Learning objectives specify what is to be learned and can guarantee more efficient learning, if properly written and implemented.

Writing them is not difficult as seen from the samples included in this presentation.

Learning objectives, however, will not be any better than the manner in which they are implemented and used by instructors, learners and school staff.


INSTITUTIONS OF
MAN'S SOCIETY
ECONOMIC
EDUCATIONAL
FAMILY
POLITICAL
RELIGIOUS
NEEDS
WANTS
EDUCATIONAL INSTITUTION
HOW TO TEACH
PHILOSOPHY OF EDUCATION
PSYCHOLOGY OF LEARNING
WHAT TO TEACH?
CRITERIA FOR STRUCTURING MAN'S KNOWLEDGE
MAN'S KNOWLEDGE WITHIN EACH INSTITUTION
FORMAL
DESCRIPTIVE
PRESCRIPTIVE
TECHNOLOGICAL


DEVELOPMENT OF INSTRUCTIONAL STRATEGIES, MATERIALS AND EVALUATION
IMPLEMENTATION
EVALUATION
IMMEDIATE
SATISFACTION OF SOCIETAL INSTITUTIONS
ULTIMATE
YES
NO
REVISION OR ELIMINATION

APPENDIX D

WRITING EDUCATIONAL OBJECTIVES/INSTRUCTIONAL STRATEGIES

	CONDITIONS	BEHAVIOR1	STANDARDS
Cognitive			
Psychomotor			
Affective			
Cognitive			
Psychomotor			
Affective			
Cognitive			
Psychomotor			
Affective			

1Types of behavior, discrimination, problem solving, recall, manipulation and speech, may be classified into the cognitive, psychomotor or affective domains.

APPENDIX E

LESSON PLAN

The lesson plan is the most ignored or misunderstood tool for teaching and is probably the most important tool that a teacher can use. An accurate and complete lesson plan will provide: 1) a teaching guide, 2) a set of instructional strategies, 3) a set of educational objectives, 4) evaluation strategies, 5) a record of teaching progress, 6) needed changes in instructional strategies and 7) a future planning guide.

TASK/TOPIC

EDUCATIONAL OBJECTIVE FOR STUDENT

STUDENT PRIOR EDUCATION/ABILITY TO BE PRE-TESTED

INSTRUCTIONAL STRATEGY FOR INSTRUCTOR

EXECUTION OF INSTRUCTION

INTRODUCTION

PRESENTATION

STUDENT APPLICATION

SUMMARY

EVALUATION STRATEGY

SUPPLIES NEEDED

EQUIPMENT NEEDED

EVALUATION OF INSTRUCTION

APPENDIX F

Video Recording Equipment

Do not let the equipment become the focus of your efforts. Set up the equipment. Focus the camera so all concerned person, e.g. teacher and students, are included in the picture, push the record button and leave the equipment alone until the session is completed. Do not try close ups of persons.

Keep tapes away from heat and electrical apparatus.
Play tapes that are at room temperature, 70°+.
Watch the rims of the reels. The tape will quickly be ruined if the edges are cut and frayed.
Clean the video recorder heads every hour.
Vacuum the video recorder to remove dust.
Pointing a camera at a bright light will cause a burned spot in the vidicon tube and a corresponding black spot in the picture.
Begin recording ten to twenty turns on the tape. The first part of the tape is ruined by handling. Oil from the hands ruins tape and will reduce the life of lights if you handle them.
Do not snap controls on the recorder.
Record all sessions on the tape jacket and mark corresponding numbers on the jacket and reel so tapes will not be mixed up and recordings accidentaly destroyed.
When you purchase equipment make sure there is good and fast maintenance available.

APPENDIX G

Instructor _____ Teaching No. _____
Tape No. _____ Counter ____ To _____
Rater _____

CRITIQUE FORM 1
TEACHING A COMPLETE LESSON

Directions: The following items will be used to analyze the teacher's teaching. If the teacher did not accomplish the item, mark "Did Not Accomplish." If the teacher did accomplish the item, mark "How Well Accomplished."

Did the teacher throughout the lesson:	Did Not Accomplish	HOW WELL ACCOMPLISHED: Very Poor	Poor	Average	Good	Excellent
1. use instructional materials that aided the student in learning (e.g., equipment, materials, audio-visual media)?	( )	( )	( )	( )	( )	( )
2. provide opportunity for student response and participation?	( )	( )	( )	( )	( )	( )
3. vary the pace and methods of presenting the lesson so the student remained interested?	( )	( )	( )	( )	( )	( )
4. react favorably toward student questions, answers and comments; and avoid repeating student replies?	( )	( )	( )	( )	( )	( )
5. present the lesson so the student could follow and understand the lesson from start to finish?	( )	( )	( )	( )	( )	( )

1 Developed by Dr. Calvin J. Cotrell, Dr. Charles R. Doty, Dr. James L. Hoerner and Edward R. Hauck, The Center for Vocational and Technical Education, Columbus, Ohio, March 1968. Revision by Charles R. Doty, Rutgers University, August 1971.

	HOW WELL ACCOMPLISHED					
	Did Not Accomplish	Very Poor	Poor	Average	Good	Excellent
Did the teacher in the introduction:						
1. link the lesson to student past knowledge or experience so the student could accept the objectives on his own terms?	( )	( )	( )	( )	( )	( )
2. state specifically <u>what</u> the objectives of the lesson were in terms of student behavior?	( )	( )	( )	( )	( )	( )
3. state <u>why</u> the objectives were important in terms of student needs?	( )	( )	( )	( )	( )	( )
4. state <u>how</u> the student would proceed in accomplishing the objectives of the lesson?	( )	( )	( )	( )	( )	( )
5. state <u>how</u> the student would know when he had achieved the objectives of the lesson?	( )	( )	( )	( )	( )	( )
Did the teacher in the presentation:						
1. talk to the student and not to the instructional materials? (Note: In some presentations, where a teacher is manipulating materials or machinery, the teacher must direct his attention to these, but the teacher can also make the student feel he is receiving direct attention.)	( )	( )	( )	( )	( )	( )
2. present each idea or step in the proper sequence, making each stand out?	( )	( )	( )	( )	( )	( )
3. present only one idea, or method of doing an operation, at a time: (Or did the teacher present two or more ideas, or methods of doing an operation, which confused the student?)	( )	( )	( )	( )	( )	( )

	Did Not Accomplish	Very Poor	Poor	Average	Good	Excellent
4. present the information or skill with ease? (Indicating the teacher had practiced before attempting to teach.)	( )	( )	( )	( )	( )	( )
5. clarify any points not clear to the student?	( )	( )	( )	( )	( )	( )
6. remain on the objective/s of the lesson? (Avoid introducing irrelevant information or skills.)	( )	( )	( )	( )	( )	( )
Did the teacher during application by the student:						
1. observe the student practicing (mentally or physically applying) and provide encouragement, correction or additional information to guide the student?	( )	( )	( )	( )	( )	( )
Did the teacher in the summary:						
1. have the student summarize key points rather than doing it himself?	( )	( )	( )	( )	( )	( )

Comments: (What can the teacher do to improve the lesson?)

APPENDIX H

Instructor _____ Teaching No. _____
Tape No. _____ Counter ____ To ___
Rater _____

IDENTIFY THE SPECIFIC OBJECTIVES FOR A LESSON[1]

A specific objective for a lesson is a statement describing a proposed change in a learner--a statement of what the learner is to be like when he has successfully completed a learning experience. It is a description of a pattern of behavior (performance) the learner must be able to demonstrate.[2]

The following items will be used to analyze the teacher's teaching. If the teacher did not accomplish the item, mark Did Not Accomplish. If the teacher did accomplish the item, mark How Well Accomplished.

	Did Not Accomplish	HOW WELL ACCOMPLISHED				
		Very Poor	Poor	Average	Good	Excellent
Did the teacher in identifying the specific objectives:						
1. State the specific behavior that will be accepted as evidence that the learner has achieved the objective?	( )	( )	( )	( )	( )	( )
2. Specify what the learner will be provided?	( )	( )	( )	( )	( )	( )
3. Specify what the learner will be denied?	( )	( )	( )	( )	( )	( )
4. Specify unfavorable behavior to be avoided?	( )	( )	( )	( )	( )	( )

[1]Developed by the Performance Evaluation Project, Vocational Task Force, Charles R. Doty, Chairman, Rutgers University, February 1972. (Original work by Frank Blou).

[2]Mager, R. F., Preparing Instructional Objectives, Palo Alto: Fearon Publishers, 1967, pp. 3-12.

	HOW WELL ACCOMPLISHED					
	Did Not Accomplish	Very Poor	Poor	Average	Good	Excellent
5. Specify the criteria of acceptable accuracy in performance?	( )	( )	( )	( )	( )	( )
6. Specify the criteria of acceptable time in performance?	( )	( )	( )	( )	( )	( )

APPENDIX I

Instructor _____ Teaching No. _____
Tape No. _____ Counter _____ To ___
Rater _____

DIRECTING STUDENT LABORATORY EXPERIENCE[1]

A student's laboratory experience should be carefully coordinated with his prior instruction and should be learned--by doing.

The following items will be used to evaluate the teacher's teaching. If the teacher did not accomplish the item, mark Did Not Accomplish. If the teacher did accomplish the item, mark How Well Accomplished.

Did the teacher during the laboratory session:	HOW WELL ACCOMPLISHED					
	Did Not Accomplish	Very Poor	Poor	Average	Good	Excellent
1. Circulate among students to observe student performance?	( )	( )	( )	( )	( )	( )
2. Periodically scan the laboratory even when given individual instruction?	( )	( )	( )	( )	( )	( )
3. Immediately react to malfunction or improper use of equipment, tools and supplies?	( )	( )	( )	( )	( )	( )
4. Provides individual instruction as needed?	( )	( )	( )	( )	( )	( )
5. Guides the student in the laboratory experience rather than doing the work for the student?	( )	( )	( )	( )	( )	( )
6. Systematically checks student progress?	( )	( )	( )	( )	( )	( )
7. Sequences laboratory work.	( )	( )	( )	( )	( )	( )

[1]Developed by the Performance Evaluation Project, Vocational Task Force, Charles R. Doty, Chairman, Rutgers University, February 1972.

APPENDIX J

Instructor _____ Teaching No. ____
Tape No. _____ Counter _____ To ___
Rater _____

ORAL QUESTIONING[1]

A question is an act or instance of asking. Questioning by the teacher promotes directed mental activity on the part of the student by providing opportunity for the student to be actively involved in the lesson. The question may be stated in words or may be simply an inquisitive facial expression or gesture. It requires some type of response on the part of the student: stating a fact; recalling a selected thought; making a comparison of two things; making a judgement; analyzing an attitude or appreciation; or, directing thought.

The effective use of questioning by the teacher increases student freedom of action, affords him more opportunities to express ideas, and makes him less dependent on the teacher.

When using questions during the lesson did the teacher:	HOW WELL ACCOMPLISHED					
The following items will be used to evaluate the teacher's teaching. If the teacher did not accomplish the item, mark Did Not Accomplish. If the teacher did accomplish the item, mark How Well Accomplished.	Did Not Accomplish	Very Poor	Poor	Average	Good	Excellent
1. Use questions to draw information from the students?	( )	( )	( )	( )	( )	( )
2. Direct the questions to the entire class before calling upon an individual for a response?	( )	( )	( )	( )	( )	( )
3. Provide the student with an opportunity to think about the question and to formulate an answer before requiring a response?	( )	( )	( )	( )	( )	( )

[1]Developed by the Performance Evaluation Project, Vocational Task Force, Charles R. Doty, Chairman, Rutgers University, March 1972.

	HOW WELL ACCOMPLISHED					
	Did Not Accomplish	Very Poor	Poor	Average	Good	Excellent
4. Provide each student an opportunity to participate?	( )	( )	( )	( )	( )	( )
5. Present the questions in a logical order?	( )	( )	( )	( )	( )	( )
6. Have the student repeat his answer if there was a need for special emphasis or clarity?	( )	( )	( )	( )	( )	( )
7. Give attention and consideration to each student's response?	( )	( )	( )	( )	( )	( )
8. Use a variety of concise, single idea, simple recall and thought-level questions?	( )	( )	( )	( )	( )	( )

APPENDIX K

Instructor _____ Teaching No. _____
Tape No. _____ Counter _____ To ___
Rater _____

SUMMARIZING A LESSON[1]

Summarizing a lesson enables the teacher to emphasize the main ideas covered in the lesson and aids him in determining what the students have learned and what they need to learn.

The following items will be used to evaluate the teacher's teaching. If the teacher did not accomplish the item, mark Did Not Accomplish. If the teacher did accomplish the item, mark How Well Accomplished.

Did the teacher in summarizing the lesson:	Did Not Accomplish	HOW WELL ACCOMPLISHED: Very Poor	Poor	Average	Good	Excellent
1. Provide time for a summary?	( )	( )	( )	( )	( )	( )
2. Provide an opportunity for the students to explain or demonstrate the main points of the lesson?	( )	( )	( )	( )	( )	( )
3. Re-emphasize the main ideas covered in the lesson presentation?	( )	( )	( )	( )	( )	( )
4. Reconstruct the flow of the lesson in a logical sequence?	( )	( )	( )	( )	( )	( )
5. Avoid introducing any new major ideas or concepts?	( )	( )	( )	( )	( )	( )
6. Provide continuity between this lesson and future lessons or experience?	( )	( )	( )	( )	( )	( )

[1]Developed by the Performance Evaluation Project, Vocational Task Force, Charles R. Doty, Chairman, Rutgers University, March 1972.

APPENDIX L

SUPERVISORY PROTOCOL[1]

Because of the importance of feedback which the learner receives, the following guidelines may be used in supervisory conferences to produce change in behavior whether the learner is a teacher, teacher educator-in-training or coordinator.

The teacher educator and teacher should agree upon at least one but not more than two behaviors of a skill for the teacher to practice during the next teaching session.

The teacher educator and teacher should concentrate only upon the behavior of the particular skill being practiced by the teacher.

The teacher educator should avoid comments on mannerisms and cosmetic appearances. Those persons receiving video feedback will probably notice inappropriate behaviors without the teacher educator's identifying them.

The teacher educator should avoid comments on subject content except for clarity of presentation. (This applies when teacher skills are being practiced.)

The person receiving video feedback should be allowed to view his session without his attention being distracted by the teacher educator's comments.

The teacher educator should assist and encourage the teacher to increase teacher - student and student - student interaction.

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[1]Doty, Charles R. "Recent Experiments in Micro-Teaching." In Law, Gordon F. (Ed.) Contemporary Concepts in Vocational Education. Washington, D.C.: American Vocational Association, 321-22.

APPENDIX M

Teacher Educator's Name

Teacher's Name Conf. No.

Rater (MTE,TE,T) Tape No.

CRITIQUE FORM
INTRODUCTION OF A CONFERENCE

The introduction phase of a supervisory conference "sets the stage" for teacher involvement in the body of the conference. The introduction should motivate the teacher to accomplish the objectives of the conference.

The following items will be used to evaluate the teacher educator's introduction of the conference. If the teacher educator did not accomplish the item, put an X in the box below Did Not Accomplish. If the teacher educator did accomplish the item, put an X in the box which best describes How Well the teacher educator Accomplished the item.

Did the teacher educator in the introduction of the conference:	HOW WELL ACCOMPLISHED					
	Did Not Accomplish	Very Poor	Poor	Average	Good	Excellent
1. provide an appropriate physical setting? (e.g., quiet, private, comfortable atmosphere)	( )	( )	( )	( )	( )	( )
2. have all the necessary materials ready for use? (e.g., critique forms, aids, tape recordings)	( )	( )	( )	( )	( )	( )
3. exhibit behavior designed to relieve tension in the teacher? (e.g. informal, relaxed, and accepting in manner)	( )	( )	( )	( )	( )	( )
4. communicate to the teacher the purpose of the conference?	( )	( )	( )	( )	( )	( )
5. relate the objectives of the conference to previous conferences or experiences?	( )	( )	( )	( )	( )	( )
6. make a smooth transition into the body of the conference?	( )	( )	( )	( )	( )	( )

APPENDIX N

Teacher Educator's Name

Teacher's Name Conf. No.

Rater (MTE,TE,T) Tape No.

CRITIQUE FORM
BODY OF CONFERENCE

Most of the discussion, planning, and evaluation should take place during the body of the supervisory conference. It should be a time of teacher involvement and cooperative endeavor.

The following items will be used to evaluate how the teacher educator conducts the body of the conference. If the teacher educator did not accomplish an item, put an X in the box below Did Not Accomplish. If the teacher educator did accomplish the item, put an X in the box which best describes How Well the teacher educator Accomplished the item.

During the body of the conference did the teacher educator:	Did Not Accomplish	HOW WELL ACCOMPLISHED: Very Poor	Poor	Average	Good	Excellent
1. give the teacher an opportunity to express his ideas about his teaching performance? (e.g., guided the teacher in self-evaluation)	( )	( )	( )	( )	( )	( )
2. identify a pattern of teaching behavior, and bring it to the teacher's attention? (e.g., substantiate the teaching behavior with tape recordings, records, aids, etc.)	( )	( )	( )	( )	( )	( )
3. offer constructive criticism in an empathetic manner? (e.g., was specific in evaluation of the teacher's strengths and weaknesses)	( )	( )	( )	( )	( )	( )

	Did Not Accomplish	HOW WELL ACCOMPLISHED: Very Poor	Poor	Average	Good	Excellent
4. originate and suggest new ideas without dominating the teacher's thoughts and actions?	( )	( )	( )	( )	( )	( )
5. encourage the teacher to do creative thinking and planning? (e.g., was receptive to teacher's ideas)						
6. suggest only one or two items on which the teacher should concentrate his efforts for improvement? (e.g., did not confuse the teacher with too many ideas at one time)	( )	( )	( )	( )	( )	( )
7. follow a logical sequence? (e.g., in discussion, review of recordings, etc.)	( )	( )	( )	( )	( )	( )
8. make good use of available time? (e.g., kept on topic, wasted no time on extraneous talk)	( )	( )	( )	( )	( )	( )

APPENDIX O

Teacher Educator's Name

Teacher's Name Conf. No.

Rater (MTE,TE,T) Tape No.

CRITIQUE FORM
CLOSURE OF CONFERENCE

In addition to pulling together the major points of the conference and acting as a link between past and future experiences, the closure should leave the teacher with a feeling of achievement.

The following items will be used to evaluate the teacher educator's closure of the conference. If the teacher educator did not accomplish the item, put an X in the box below Did Not Accomplish. If the teacher educator did accomplish the item, put an X in the box which best describes How Well the teacher educator Accomplished the item.

During the closure of the conference did the teacher educator:	Did Not Accomplish	HOW WELL ACCOMPLISHED: Very Poor	Poor	Average	Good	Excellent
1. involve the teacher in reviewing the major points discussed? (e.g., stressed important ideas and clarified any misunderstandings)	( )	( )	( )	( )	( )	( )
2. give the teacher an opportunity to determine and express future objectives? (e.g., reached an agreement on next steps to be taken)	( )	( )	( )	( )	( )	( )
3. keep a record of agreements reached and make sure the teacher had a comparable record?	( )	( )	( )	( )	( )	( )
4. reinforce desirable behavior patterns that had been identified? (e.g., ended the conference on an encouraging note and left the teacher with a feeling of accomplishment)	( )	( )	( )	( )	( )	( )

APPENDIX P

DIARY OF FEELINGS
by
Florence Mintz

I worried at first about how I would appear - this left almost immediately. Should have had some visual aids - used chalkboard extensively and exclusively. Perhaps this could have been avoided if there were more time to prepare for the first teaching sessions.

First session (demonstration of manipulative skill) a fiasco. Should have chosen one that did not require use of equipment. If this lesson is ever repeated, the skill should be one that can be accomplished realistically with what is readily available. I should have recognized this last evening when planning.

Second session (theory) also frustrating - couldn't complete lesson in time allotted. Lesson must be re-planned. A question arises, however, as to the determination of whether learning is really taking place. If no time is devoted to getting formative evaluation (feedback) from students it would seem to defeat the purpose of microteaching. Should formative evaluation show learning is not taking place, does this not require the teacher to throw the lesson timing out and return to the point where learning stopped? Should not the behavioral objectives be adapted to all learning styles as well as innate aptitudes and abilities?

7-12 Supervised Teaching and Supervisor

First session as "Supervisor" went clumsily. I felt I needed some instruction. It was not until after the session when reading the instruments that some of the more important elements began to emerge. It is my opinion that the "Supervisor" should have been given the instruments prior to the session. There are those among us who have had supervisory experience and/or courses in the supervision of instruction, thus they probably tend to avoid the non essential criticisms that the novice falls prey to.

Despite my every attempt to remain non-threatening I did not succeed. The teacher whom I supervised was defensive and this should not be the case in a well-conducted supervisory session. Perhaps I did not compliment

the "good" aspects of the teaching session sufficiently to establish the needed rapport. This requires more attention on my part.

(In speaking with the "teacher" after the session had been videotaped, his remarks to me tended to confirm my earlier feelings i.e. he resented my comments but felt the session was too brief to defend his teaching techniques).

Second session as "supervised teacher," I was more comfortable although I did not complete the lesson as intended. I have never been supervised except for a brief visit from the college supervisor during my practice teaching days. It was not until after the teaching session was over that I gave any thought to the "Supervisor" or his criticisms. Naturally, I worried about his good opinion; but after my earlier experience as "Supervisor", I determined to take all criticism in the spirit they were offered. I firmly believe this takes some pre-conditioning. My "Supervisor" was exceeding kind, and I felt more at ease with him than I imagined I would.

7-13 10 Minute Teaching Session 4

I was disappointed once more with my inability to complete the lesson in the time designated. Since I prefer to involve students with question and answer method rather than straight lecture the experience has shown I need practice in eliminating all but the most essential points.

Although this was a session for remote supervision, someone remained in the room to work the equipment (not Dr. Doty) - this was the first time I got the sensation of role playing rather than a real teaching session. I believe this feeling was heightened because I had not been prepared to accept someone in the room other than the students or Dr. Doty.

PARTICIPANT QUESTIONNAIRE

Please comment on each item.

1. As a result of the orientations during the workshop, did you understand:

   A. Workshop objectives?

   B. Micro-teaching procedures?

   C. Supervision procedures?

   D. Video feedback procedures?

2. Were you able to write educational objectives for student performance?

3. Were you able to write instructional objectives for teacher performance?

4. Were you able to efficiently practice teaching competencies using micro-teaching?

5. Were you able to analyze a teaching competency?

6. Were you able to efficiently practice supervisory skills in the micro-supervision (face-to-face) conference?

7. Were you able to efficiently practice supervisory skills using remote supervision via closed circuit television?

8. Were you able to write a television script?

9. Were you able to produce a model teaching skill?

10. Were you able to produce a model supervisory skill? (optional for workshop)

11. What relevant learning did this workshop enable you to do, if any?

APPENDIX R

DESCRIPTION OF THE DARTS-DICE GAME

The darts-dice game is a means of getting students to discover and discuss the difference between taking personal responsibility for their actions and leaving things to chance. If they depend on their own skill to win the game--throwing the darts--they are taking personal responsibility. If they choose to cast the dice, they leave the outcome of the game to chance. Also during the game the other two action characteristics of people with high n-ach (taking moderate risk and using concrete feedback to modify behavior) are reintroduced.

I. Set-up and procedure

Game Equipment

1) Dartboard with seven possible scores (100, 80, 60, 40, 30, 20, 10) and at least 6 darts.

2) Two oversized dice.

Regulations:

1) Darts are thrown from a distance of 12 feet. The bull's-eye should be 4 feet 9 inches from the floor.

2) The dice are cast from a shoebox.

The object of the game is to make points on each throw of the darts or dice. Points are made when the player makes his bid: i.e., before each throw, the player bids for a certain score on the dartboard or one of several outcomes from rolling the dice.

If the player makes, or betters his bid, he receives the number of points he bid. If he does not make his bid, he receives 0 points. What must be achieved with the darts and dice to obtain various numbers of points is given in the attached table. It should be noted and explained to the players that the mathematical chances of making a certain number of points are the same whether they cast dice or throw darts. Thus their basic choices are how they want to earn points and <u>how</u> <u>many</u> points they bid for.

As with the ring toss game, players may strive to better their scores, to achieve unique results, or to do better than other players. Also, as in the ring toss game, they have an opportunity to take moderate risks (i.e., to bid for scores between 30 and 70) and to use concrete feedback to modify their behavior (they may decide to change their bids, to throw differently, to change from darts to dice).

There are two basic rounds to the game, with potential variations in later rounds at the discretion of the teacher. Round one consists of six throws of either darts or dice. Each player first decides whether to throw the darts or to cast the dice. Once decided, he cannot change from darts to dice, or v se-versa, during the round. Before each throw the player states his bid. Bid and result are recorded on the attached record sheet for each of the six throws. The second round is exactly like the first. Players choose darts or dice, bid and throw six times. A possible third round is team competition. Essentially it is played in the same way rounds one and two are played. However, each person is a member of one of two teams. Players are matched in pairs according to their total previous scores and divided into teams. Team points are totaled at the end.

II. Discussion

The discussion should help the students to clarify the difference between personal responsibility and chance. Although statistically, the dice win the game as surely as the darts, they do not demand personal skill or allow for the use of concrete feedback to modify behavior. The students should analyze their behavior during the discussion after the game to see if they actually exhibited n-ach characteristics, and why or why not. The final portion of the discussion should be devoted to the generalization of these ideas to their real life situations.

These questions might be used to start discussion:

1) Whom or what were you competing against?

2) Why did you choose the darts or dice?

3) Why did (didn't) you change you bid after the ____ throw?

4) Why did you change to darts (dice) after the first round?

5) Who played the game most successfully? Who won? How did he win?

6) Why did you choose the high (low) risk bids?

7) Do you think it is just as satisfying to win with the dice as with the darts?

8) Can you think of other situations where you have the choice of taking responsibility or leaving the result to chance? Which choice do you usually make?

9) In what situations have you taken the initiative to make things happen the way you wanted them to?

III. Additional comments

A few comments about "personal responsibility" may be of help to the teachers in regard to the discussion. The essence of personal responsibility is having control over what happens. In the most sparkling examples, personal responsibility is taking the initiative to get things done. People who take initiative do so without being compelled, assigned, or asked. They are "self-starters", originators, organizers. People who get ahead, people who are successful businessmen, tend to take initiative and personal responsibility. They don't like to leave things to chance.

In a sense this game illustrates only the most rudimentary aspect of personal responsibility. Its other, and far more important aspects, must be taught in other ways: in the discussion following the game, through case studies, through examples given by the teacher or identified in the students, through the self-change projects, etc.

As a general goal during the course the students should be taking more and more personal responsibility, more and more initiative. In order for this to happen, teachers can provide opportunities for, but cannot obviously instruct students to take initiative. Spontaneous examples of student initiative can be identified and rewarded. As a general rule, high standards are set, but the students should be allowed to retain the initiative.

Exactly how this is implemented in class, of course, must be determined by the teacher in the particular teaching context.

1) High need-achievers take moderate risk. They set challenging goals. (Depending on native talent, they stand from 6-10 feet or so.) Doing things that are too simple doesn't give them much pleasure (standing at 1 foot). Doing things that are too hard or impossible doesn't appeal to high achievers either. (They usually don't stand at 20 feet.)

2) High need-achievers make use of concrete feedback. They modify their behavior on the basis of results. If they got zero ringers from 10 feet, they move up the next time. If they get four ringers from 5 feet, they move back the next time to a more challenging distance.

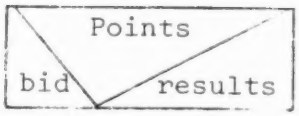
3) They compete with some standard of excellence (to do better than others, or to get more than they got the previous time).

4) People who take moderate risk tend to get ahead - e.g., in this game the people who got most points took moderate risk, etc.

During the discussion the words "moderate risk" and "using feedback" are introduced explicitly. At the end of the discussion an attempt is made to get students to generalize these concepts to their own lives through a variety of questions. For example: "Can you think of places in your life where you 'use feedback', take 'moderate risk', areas where you are taking high or low risks? How would things change if you took moderate risks? How might you use concrete feedbakc?" etc.

This session usually lasts an hour or more.

DARTS-DICE SCORE SHEET ROUND ____



Name	Darts or Dice	1	2	3	4	5	6	Total

WHAT MUST BE ACHIEVED TO EARN POINTS

POINTS	DARTS	DICE
100	100	2 on first dice and 2 or 4 on second dice
80	80 or better	2 on one dice (throw only one)
60	60 or better	2 or 4 on one dice (throw one)
40	40 or better	2,4 or 6 on one dice (throw one)
30	30 or better	2,3,4, or 6 on one dice (throw one)
20	20 or better	2,3,4, 5 or 6 on one dice (throw one)
10	Hit the board	2,3,4,5, or 6 on the first dice or 2,3,4,5, or 6 on the second dice